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Food Processing and Beverage Industries: Moving Toward Concentration

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Agricultural processing and beverage industries provide the link between farmers and consumers, where wheat becomes a loaf of bread or a croissant and milk becomes packaged cheese or ice cream. In this way, food processors actually define much of what is available to consumers. Although the agricultural processing industries represent a broad spectrum of products, all are manufacturers turning raw agricultural inputs into a constantly expanding array of new products.

Economic swings tend to have powerful effects on the food processing and beverage sector because aggregate demand rises slowly, primarily with population increases. Therefore, with little opportunity for dramatic growth, the cost side of the picture—labor, energy, interest and exchange rates, and inflation—takes on greater-than-normal importance. In this context, the mid-1980's were turbulent times for agricultural processors.

The U.S. Economy and Food Processing

Between 1975 and 1984, the U.S. economy experienced a number of major shocks. Hardest hit were manufacturing and agricultural-related industries. During the second half of the 1970's, the economy, still reeling from the effects of the first energy crisis, was hit by another. At the same time, inflation and interest rates exploded, foreign competition seemed to dominate many of our most important manufacturing industries, and the dollar hit post-World War II lows against most major currencies. Agriculture, however, thrived. The low exchange rates and high inflation helped exports and fueled the dramatic expansion in U.S. agricultural productive capacity.

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Then, in the first half of the 1980's, the United States experienced two recessions and one economic boom. The rapid economic shifts were accompanied by dramatic increases in the value of the dollar, lower interest rates (though real interest rates remained high), and unprecedented increases in the Federal budget and trade deficits. These events had further corrosive effects on manufacturing, while putting agriculture into an economic tailspin, as prices of commodities and land dropped precipitously. Recently, some gains in agriculture and manufacturing have been made, especially as dollar exchange rates have once again plummeted.

As with the rest of the U.S. economy, the agricultural processing and beverage sector underwent restructuring between 1975 and 1984. Faced with increasing costs—especially for labor, raw products, and energy in the late 1970's—and rapid changes in consumer tastes and purchasing patterns, food processing industries increased automation and aggressively pursued mergers and acquisitions. For example, Pillsbury Co. purchased Green Giant Co. in 1979, Haagen-Dazs (ice cream manufacturing and retailing) in 1983, and Van De Kamp frozen seafood in 1984.

The net result over the 10 years was that employment in agricultural processing industries fell by a little over 2 percent and the number of business establishments dropped almost 13 percent. Underlying these numbers are two significant trends—an ongoing concentration of establishments and a shifting of employment patterns within the food processing and beverage sector.

Food and related product manufacturing—the bakery industry and meat packing, for example—plays an important role in the U.S. food and fiber system. This group of manufacturers is the principal buyer of farm production and the major supplier of food and beverage products to retailers and consumers. In 1984, food processors shipped $300 billion worth of products and accounted for 7.6 percent of the national income originating in manufacturing and 6.7 percent of the total manufacturing employment. In 1986, food manufacturers actually ranked first in sales among all manufacturers, including automobiles and steel.

The sector is also known for its diversity. There are 47 food and beverage manufacturing industries, which employed 1.4 million workers in 1984 in some 21,160 establishments. These businesses range from meat packing and processing plants to canneries, distilleries, bakeries, and even ice manufacturers. Another indication of diversity, as well as competition for consumer spending, is the number of new products introduced. In 1977, 1,791 new products were brought to market by these industries. By 1984, the number had risen to 1,988. New products virtually exploded in 1985 and 1986 with 2,206 and 2,500 entries. However, just seven industries (bread and related products, meat packing plants, bottled and canned soft drinks, poultry dressing plants, miscellaneous food preparations, fluid milk, and sausage and other prepared meats) accounted for more than half of total employment and just under half of the establishments in the food processing and beverage sector.

Industry Location

In 1984, most food processing was located in metropolitan areas. Some 14,490 establishments employed about one million workers. Slightly more than half of these urban jobs and establishments were in large cities—metro

areas with populations exceeding one million (*table 1*). An additional one-third were located in medium-size metro areas with populations between 250,000 and 999,999. The rest of the metro employment and establishments, some 17 percent, were found in small metropolitan areas.

Only five industries accounted for 44 percent of the sector's total metro employment: bread and related products (146,000 employees), bottled and canned soft drinks (93,000), meat packing plants (72,000), miscellaneous food preparations (71,000), and fluid milk processing (60,000). Surprisingly, these industries also accounted for 44 percent of food processing jobs in each of the three types of metro areas.

While most of the sector's employment and establishments were concentrated in metropolitan counties, nearly 30 percent were located in rural America in 1984. At that time, nonmetropolitan counties accounted for 6,670 food processing establishments providing jobs to some 406,000 persons. More than half of these businesses and jobs were in the less urbanized areas—counties with urban populations between 2,500 and 19,999. Urbanized nonmetro counties, with urban populations of at least 20,000, accounted for an additional 33 percent of the establishments and 37 percent of the employment. Totally rural counties, however, had only 10 percent of the sector's nonmetro establishments and 7 percent of the employment.

Poultry dressing plants and meat packing plants dominate food processing employment in rural America. In 1984, these industries provided 69,000 and 62,000 rural jobs, respectively. The third largest employer in rural areas, makers of frozen fruit and vegetable products, was far behind, accounting for 21,000 workers. More than half of all employment in poultry dressing plants is concentrated in the South, while over half of the meat packing employment and establishments are in the Midwest and Texas. The majority of frozen fruit and vegetable employment and establishments are predictably located on the West Coast and in Florida.

Table 1. In 1984, Most Food Processing Was Located in Metropolitan Areas

Area	Employment		Establishments	
	Thousand	Percent	Number	Percent
Metropolitan[1]	1,010	71.3	14,490	68.5
Large	515	36.4	7,730	36.5
Medium	321	22.6	4,530	21.4
Small	174	12.3	2,230	10.6
Nonmetropolitan[2]	406	28.7	6,670	31.5
Urbanized	152	10.7	2,190	10.3
Less urbanized	226	16.0	3,800	18.0
Rural	28	2.0	680	3.2
Total	1,416	100.0	21,160	100.0

[1]Metropolitan areas are defined in terms of total population: over one million—large; 250,000 to 999,999—medium; and less than 250,000—small. [2]Nonmetropolitan areas are defined in terms of urbanized population: at least 20,000 in a county—urbanized; 2,500 to 19,999 less—urbanized; and no urban population—rural.

Source: *County Business Patterns,* Bureau of the Census, Department of Commerce.

Industry Concentration Is Increasing

Over the past several decades, the structure of the U.S. food processing sector has changed dramatically. Faced with slow growth in consumer demand, increased prices for farm products, energy, labor, and packaging, and narrow profit margins, food and beverage processors have been consolidating.

The Commerce Department's 1983 *U.S. Industrial Outlook* estimated that a record 700 mergers and acquisitions had taken place in 1982. Of the top 200 food processing firms in 1975, ranked according to estimated U.S. food shipments, about one out of five had been bought by the summer of 1984. Besides Pillsbury's purchases, General Foods Corp. bought Oscar Mayer and Co. in 1981 and Entenmann's Bakeries in 1982. Beatrice Foods Co., ranked third in 1975, acquired Esmark, the top food processor that year, in 1984 for $2.9 billion. Between 1972 and 1982, the number of food and beverage firms declined by 19 percent to about 19,000. The number of establishments dropped 13 percent from 24,290 in 1975 to 21,160 in 1984.

Consolidation was widespread throughout the sector, both in metropolitan and rural areas. Between 1975 and 1984, the number of establishments dropped in seven of the nine

major industries (*table 2*). Only the sugar and confectionery products industry and the miscellaneous food and related products industry—making frozen packaged fish, roasted coffee, and manufactured ice, for example—grew in the number of establishments. But these increases were quite small, less than 1 percent and 6 percent, respectively. In contrast, the dairy products industry (primarily fluid milk processing) lost almost 30 percent of its number.

Nonmetro areas were the hardest hit. Almost one out of five rural establishments closed during the 1975-84 period, compared with one in ten in metro areas. Closure rates were especially high, 30 percent or more, for nonmetro dairy product, bakery, and beverage firms. Closures in these industries, and in preserved fruit and vegetable, grain mill, and fats and oil products, exceeded the rates found in metro areas.

These closure rates point to a pattern of heavier consolidation in rural areas. In large metropolitan areas, closure rates averaged about 8 percent between 1975 and 1984 (*table 3*). In medium and small metro areas, these rates increased to 12.6 and 13.2 percent. Nonmetro areas continued the trend, but the rates jumped to 16.9 percent in urbanized nonmetro areas, 18.6 percent in less urbanized areas, and 19.5 percent in totally rural areas.

Employment Shifts

Consolidation in the food processing and beverage sector appears to have been accompanied by a shift in employment to less populated areas. For the United States as a whole, employment in the sector decreased 2.2 percent during the 1975-84 period, a loss of 32,000 jobs. This overall loss, however, masks clearly divergent trends in metro and nonmetro

Table 2. The Number of Food Processing Establishments Declined Between 1975 and 1984

Industry	Metro areas		Nonmetro areas	
	Employment	Establishments	Employment	Establishments
	Percent change 1975-84			
Meat	−11.6	−15.2	29.0	−12.1
Dairy	−17.8	−25.4	−11.0	−36.8
Preserved fruits and vegetables	−5.9	−5.5	7.6	−14.0
Grain mill	−9.7	−4.8	−3.8	−8.1
Bakery	−4.4	−6.2	0.9	−34.4
Sugar and confectionery	−4.5	0.2	2.8	1.4
Fats and oils	−19.7	−13.6	−12.3	−17.2
Beverages	−4.5	−17.7	−1.6	−29.6
Miscellaneous food and related products	12.5	5.8	18.8	5.2
Total	−6.4	−10.2	9.9	−18.1

Source: *County Business Patterns,* Bureau of the Census, Department of Commerce.

Table 3. Employment in Nonmetro Areas Has Grown

Area	Change between 1975 and 1984			
	Employment		Establishments	
	Thousand	Percent	Number	Percent
Metro areas[1]	−69	−6.4	−1,650	−10.2
Large	−54	−9.5	−660	−7.9
Medium	−13	−3.9	−650	−12.6
Small	−2	−0.8	−340	−13.2
Nonmetropolitan[2]	37	9.9	−1,480	−18.1
Urbanized	4	2.6	−450	−16.9
Less urbanized	30	15.0	−870	−18.6
Rural	3	12.4	−160	−19.5
Total	−32	−2.2	−3,130	−12.9

[1]Metropolitan areas are defined in terms of total population: over one million—large; 250,000 to 999,999—medium; less than 250,000—small. [2]Nonmetropolitan areas are defined in terms of urbanized population: at least 20,000 in a county—urbanized; 2,500 to 19,999—less urbanized; no urban population—rural.

Source: *County Business Patterns,* Bureau of the Census, Department of Commerce.

economies. Metro employment exhibited a definite downward trend, with the loss of 69,000 jobs—a decline of 6.4 percent for the period. On the other hand, nonmetro employment gained 37,000 jobs—a growth of 9.9 percent.

Employment changes among the different metro and nonmetro areas during the period was the complete opposite of their consolidation trends. The number of jobs fell 9.5 percent in large metropolitan areas, 3.9 percent in medium-size, and 0.8 percent in small metro areas. In nonmetro counties between 1975 and 1984, jobs increased substantially in more sparsely settled areas—from 2.6 percent in urbanized nonmetro areas to 15.0 percent in less urbanized areas and 12.4 percent in totally rural areas.

Given the economic difficulties experienced by rural areas in general, and by manufacturing in particular, it is somewhat surprising to see how employment grew in those areas between 1975 and 1984. Twenty-six of the 47 industries composing the food processing and beverage sector expanded in nonmetro areas. In contrast, metro areas had only 18 industries with positive growth. The meat packing industry, a leading employer in the sector, lost about 32,300 jobs in metro areas and 4,300 in urbanized nonmetro counties, due in part to closings by packers with high labor costs and outdated plants and machinery. On the other hand, in less urbanized rural areas, employment in meat packing plants increased by 11,300. The poultry dressing industry has experienced dramatic growth in the last decade, but most of the expansion also occurred in less urbanized rural areas where almost 16,100 jobs were added. In metro and the other nonmetro areas, this expansion was more modest—7,800 and 5,400 jobs, respectively.

Changes Among Regions

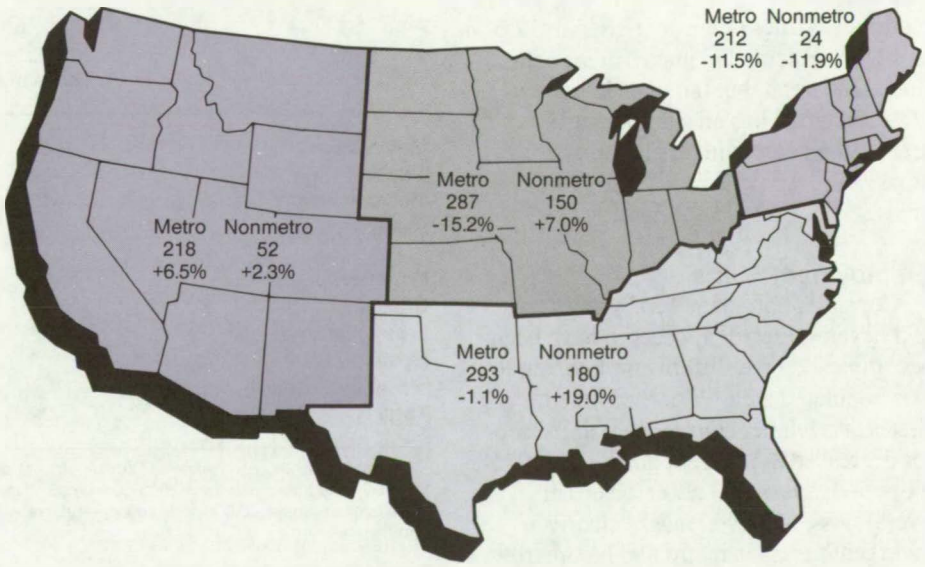
The Northeast, by far the most densely populated part of the country, was the only region to experience drops in both metro and nonmetro food processing employment during 1975-84. Shifts in employment occurred not only between metro and nonmetro areas but also between regions, as nonmetro jobs in more densely populated areas shifted to areas with still fewer people. For example, food processing employment in metropolitan areas fell in three of the four U.S. Census regions (Northeast, Midwest, and South), but increased in nonmetro areas in three of the four regions (Midwest, South, and West) (*figure 1*). It seems unlikely that firms leaving a particular metro area would all have relocated in the same region.

These data conform with the demographic shift for the period from the so-called rust belt (industrial States of the Midwest and the East) to the South and West. It also shows that the South and West have gained the most new food processing jobs—25,400 and 14,500.

Along with the drop in employment, the Northeast had the greatest rate of decline in food processing establishments. The Midwest, however, sustained the heaviest losses in actual establishment numbers. The South also experienced heavy losses. Only in the West did the number of establishments increase, but only in metro areas (*figure 2*). Given the very high closure rates for nonmetro establishments, in combination with a moderate increase in nonmetro food processing employment, the trend

Figure 1. The South and West Gained Food Processing Jobs

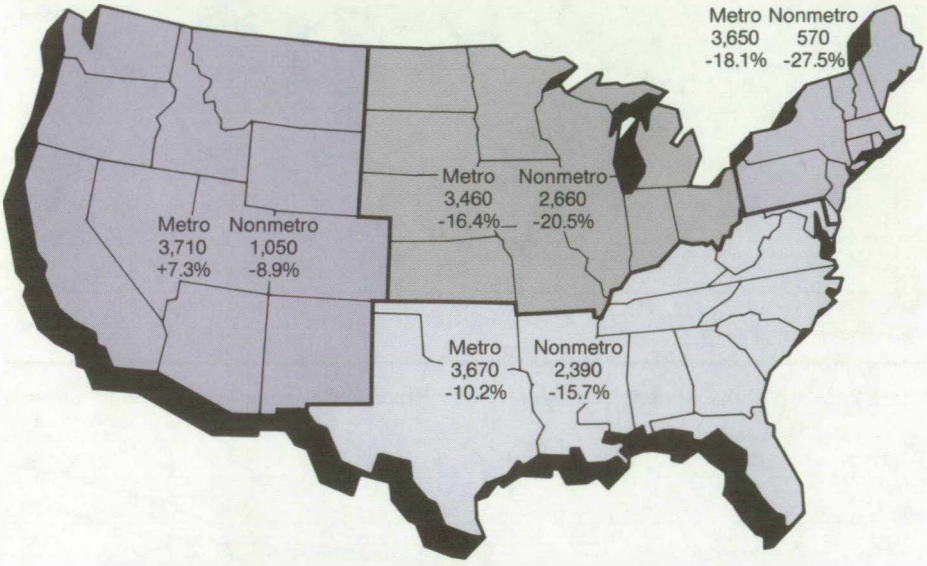
Thousand workers in 1984
Percent change from 1975



Source: *County Business Patterns*, Bureau of the Census, Department of Commerce.

Figure 2. The Northeast Experienced the Greatest Percentage Decline in Food Processing Establishments

Number of establishments in 1984
Percent change from 1975



Source: *County Business Patterns*, Bureau of the Census, Department of Commerce.

toward industry concentration would seem particularly pronounced in rural America.

Looking To the Future

Demand for food and related products over the next decade is expected to rise about 0.9 percent per year, the same growth rate as the general population. Because the demand for food and beverages is increasing slowly and consumer tastes are changing rapidly, food sector mergers will likely continue. With acquisitions, mergers, and improved efficiency and productivity through automation, no great employment increases are expected within the sector.

It is difficult to say whether the metro-nonmetro or regional shifts in employment between 1975 and 1984 will continue. Given the data available, it is not fully clear why changes in employment growth were so different between nonmetro and metro areas, or between regions. And while the impetus for mergers and acquisitions is more apparent, the reasons for the dramatic variations in metro-nonmetro industry concentration are less clear.

Lower transportation costs from farm to factory and cheaper labor seem a prime incentive for companies to favor rural areas. These factors were especially important in the 1970's when labor, energy, and transportation expenses climbed rapidly. With those costs lower or increasing at much slower rates throughout the 1980's, rural areas may look forward to long-term employment gains, though possibly at reduced rates due to slower projected national economic growth.

Rural employment may benefit from the continuing consumer trend away from red meats to poultry and other meat products. Poultry dressing plants, the largest source of food processing employment in nonmetro areas, will be major beneficiaries of this shift. Also, while overall meat packing industry employment may continue to decline, recent trends indicate that rural areas seem capable of at least sustaining, if not increasing, employment in this second most important nonmetro food processing industry.

Two other factors are likely to have significant and sustained impacts on the agricultural processing and beverage sector. Rapidly changing consumer tastes and an increasing array of new products will feed off each other, and probably continue sector volatility despite a virtual guarantee of stable, if unspectacular, sales growth. However, many of the new products will be introduced by a relatively limited number of large firms with substantial market shares in their respective industries, dampening some of the volatility.

Taking all the above considerations together, a continuation of the current overall and metro-nonmetro trends appears most probable. Factors that could most affect sector growth or promote more rapid regional shifts are any large changes in the cost of doing business in the agricultural processing and beverage sector. ■

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